

HARRY POTTER'S WORLD Science-Genetics

Student Name
Date
Class Period

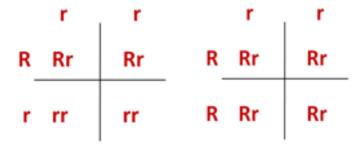
Teacher's Hair Colors

Instructions: Solve the two questions below and use a Punnett square to demonstrate how you arrived at your answers.

Question 1: Harry has dark hair like his father, but his mom had red hair. Using the genotypes of rr (red hair), Rr (dark/brown hair), RR (dark/brown hair), what possible genotypes does each of the Potters have?

The phenotypes of the Potters are: James Potter (dad)—dark/brown hair→Rr or RR Lily Potter (mom)—red hair→rr Harry Potter—dark/brown hair→Rr

• In this situation, the only possible genotype for Harry's dark hair is Rr.



Question 2: Harry marries Ginny who has red hair. What are possible genotypes of their children's hair colors?

Given Harry and Ginny's genotypes, Rr and rr, we can fill in the Punnett Square for their children's genotypes.

• Their children have a 50% chance of being either red-or dark-haired.

